The RUBBER AGE

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THE RUBBER AGE is indexed in *Industrial Arts Index*

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LATE NEWS of the Industry

Protests Against Foreign Rubber Goods Imports Brings Federal Action

Rubber Footwear and Drug Sundries from Japan and Czechoslovakia Threaten Domestic Manufacturers—Testimony Before the Commissioner of Customs Demands Protection

THE possibility of the destruction of an important proportion of America's rubber goods industry was stressed recently in hearings before the United States Tariff Commission in connection with the recent importation of cheap Japanese, Czeckoslovakian and other foreign rubber manufactured goods into the United States at prices so low as to preclude competition from domestic manufacturers.

An investigation of rubber shoe dumping already has been launched, but owing to the requirements of the law it will be some time before the study can be terminated or an anti-dumping order issued. Rubber shoes are now coming in under bond, to protect the government's revenue should the charge of dumping be established.

In the hearings before the Commissioner of Customs the rubber footwear manufacturers have undertaken to show material injury by reason of the advent in the American market during the first eight months of this year of imports from Japan representing about 10 per cent of the full year's domestic requirements.

Relating that the working force of the Firestone company footwear plant in Hudson, Mass., had been reduced from 1,800 to about 1,000 and production from 10,000 or 12,00 pairs to 2,000 a day, Charles E. Speaks indicated the possible closing of this factory soon.

"We have definitely made up our minds that so far as the footwear business goes," he declared, "if we cannot find some way legally to at least cause this footwear to be brought into the country at cost we must quit the footwear business and let them (Japan and Czechoslovakia) have it all."

He added that his firm was not going to make up any stock for the coming season's business until it is known definitely what action will be taken by the Government to aid the industry.

A similar recital was given by Arthur B. Newhall of Hood Rubber Company, Watertown, Mass., which company, he said, lost over $1,000,000 trying to continue employment of its workers. This, he said, manifestly, could not continue and January 1 was the date fixed by him for its exit from the footwear manufacturing business.

These witnesses and others presented price and production cost comparisons between imported and domestic products.

T. J. Needham, United States Rubber Company, took a number of samples from the large exhibit of shoes that had been selected to show the character of the competition from abroad.

Footwear that sells at 20c per pair in a national chain store was estimated by Mr. Newhall to cost domestic manufacturers 29c exclusive of operating profit which includes delivery to the retailer. Mr. Needham presented a sample sold to a retailer for 33c and to the consumer for 47c which would cost the domestic manufacturer 38.55c to produce without profit or selling expense.

All testified that Japanese footwear was comparable to the domestic article.

It was not possible, Mr. Newhall said, to justify the domestic price on footwear, the Japanese facsimile of which is delivered to New York retailers at 24½c per pair when the factory cost without profit or selling expense is 40.21c.

A gaiter made in Prague, was reported sold here at 58c less 20 per cent and 10 per cent, a net of about 41¾c, which could not be produced for less than 71¾c per pair here.

"Unless we get some relief," he said, "based on what these people have been able to do in other countries, a business which now affects some 200,000 persons, and I am not talking about those engaged in the production of supplies for our industry, somebody is going to have to feed them."

Warren MacPherson of the Cambridge, Mass., Rubber Company, told of the lessening of employment from 2,000 to 800 workers, with the probability of a complete cessation on January 1, unless relief is provided.

It was stressed by the manufacturers' representatives that rubber and cotton costs were approximately the same to foreign factories as their own and on a gold basis, so that depreciated currencies did not enter into the equation.

They did not undertake to demonstrate dumping, but raised the question of the ability of the foreigner to under-

sell them by so large a margin without resorting to sales below cost.

W. J. Bullwinkle of the Dodwell Company, Ltd., New York, secured on behalf of himself and other importers the right later to present their side of the case on the basis of affidavits now en route from Kobe, Japan, showing production costs in opposition to the charges of dumping.

Production of Tires Declined In August With Shipments Increasing

SHIPMENTS of pneumatic casings for the month of August amounted to 2,654,863 casings, an increase of 10.4 per cent over July this year, but were 46.5 per cent below August, 1931, according to statistics released by the Rubber Manufacturers Association, Inc.

Production of pneumatic casings for August was reported to be 3,089,201 units, a decrease of 14.6 per cent under July this year and 20.9 per cent below August, 1931.

Pneumatic casings in the hands of manufacturers August 31, amounted to 6,658,974 units, an increase of 7.4 per cent above July 31 stocks, but were 25.1 per cent below August 31, 1931.

The actual figures are as follows:

Pneumatic Casings

	Shipments	*Production*	*Inventory*
August, 1932	2,654,863	3,089,201	6,658,974
July, 1932	2,404,095	3,616,829	6,202,856
August, 1931	4,959,984	3,905,925	8,896,296

September Consumption of Rubber Remains Low With Stocks Still High

CONSUMPTION of crude rubber by manufacturers in the United States for the month of September amounted to 22,491 long tons. This compares with 22,372 long tons for August, 1932, and represents an increase of .5 per cent, according to statistics released by the Rubber Manufacturers Association.

The Association reports imports of crude rubber for the month of August to be 29,509 long tons, a decrease of 13.8 per cent below August, 1932, and 27.1 per cent below September a year ago.

The total domestic stocks of crude rubber on hand September 30 is estimated by the Association at 365,789 long tons, which compares with August 31 stocks of 357,342. September stocks show an increase of 2.4 per cent as compared with August of this year, and were 43.8 per cent above the stocks of September 30, 1931.

The participants in the statistical compilation report 46,188 long tons of crude rubber afloat for the United States ports on September 30. This compares with 42,846 long tons afloat on August 31, 1932, and 46,815 long tons afloat on September 30, 1931.

Fisk Reorganization Committee is Offered Plan by Eberstadt Group

THE Ferdinand Eberstadt committee, which is one of the three seeking to represent bond and noteholders in the receivership of the Fisk Rubber Company, have advised bond and noteholders that they should withhold deposit of securities under a reorganization plan put forward by the Orrin Wood committee the first part of September.

The Eberstadt committee advised that it is considering the development of a proposal for the purchase or reorganization of the Fisk Company on a basis more favorable to the holders of the securities than any plan yet suggested. The Committee also suggested that further information concerning the Wood plan was in order and specifically asked for answers to the following four questions:

1. What management is contemplated for the proposed new company and what are the qualifications and past records of such proposed management in the tire and rubber industry?

2. What will be the opening balance sheet of the proposed new company and will its financial position be sound? A forecast of the probable earning capacity of the proposed new company should be presented.

3. What decision has been reached concerning the question as to whether the plant and equipment of the Fisk Tire Fabric Company, or other fabric mills, are to be acquired by the proposed new company? What payments are to be made the holders of bonds of the Fisk Tire Fabric Company and what is the amount of other expenses in connection therewith?

4. What percentage of the bonds and notes are deposited under, or pledged to support, the proposed plan and is there any reasonable prospect of its success?

The Wood plan, announced in September, provided for cash distribution of $400 on each $1,000 bond and cash payment of $370 on each $1,000 note. A successor company would be formed to continue the business; and a real estate company would also be organized.

Boston Rubber Chemists Plan Varied Program for November 2 Meeting

A MEETING of the Boston Group of the Rubber Division of the American Chemical Society will be held on Wednesday, November 2, 1932, at the University Club, Boston, Mass. The dinner will begin at 6:30 P. M.

The program as scheduled will include a talk on the "Business Outlook" by Ralph D. Wilson, vice-president, Babson Statistical Organization, Inc., Wellesley Hills, Mass.; and a paper on "The Rubber Making Properties of Zinc Oxide With Some Notes on Its Manufacture and Methods of Testing," by Harlan A. Depew, Research Dept. of American Zinc Sales Company.

An entertainment feature will also be presented.

Mr. Wilson has achieved a very considerable reputation as an economist and was formerly chairman of the faculty and head of the Department of Economics and Finance at the College of Business Administration of Boston University. Mr. Depew is well known for his many valuable technical contributions to the rubber industry.

The tickets will be $1.75 each, and can be obtained from the secretary of the group, J. J. Sindler, Converse Rubber Company, Malden, Mass.

Akron Group, A. C. S., Plan Interesting Meeting Nov. 7

THE program of the next meeting of the Akron Group of the Rubber Division, A. C. S., to be held at the City Club of Akron on the evening of November 7, promises to be of particular entertainment, with such speakers scheduled as Ward T. Van Orman and Lieut. Commander Thomas Settle, talking on their experience in the International Balloon Races, and W. E. Sykes, of Farrel-Birmingham Company, speaking on the 'Romance of Gears.' The presentation of the talks will follow a dinner and an additional program of entertainment is also planned. All members of the Rubber Division, who will be in the Akron territory on November 7, are urged to attend. Reservations can be made through V. L. Smithers, secretary of the Akron Group, Central Depositors Bank Building, Akron.

(Other news of the industry will be found on Pages 62-66)

RUBBER EXCHANGE
Submits 7th Annual Report

Elects Charles Slaughter as New President and Adds Three Members to Board of Governors— Volume of Trading Totalled 258,200 Long Tons

Charles Slaughter New Exchange Head

AN UPWARD turn in rubber prices, accompanied by an expanded volume of business, followed a decline to record low levels during the year ended August 31, 1932, says John L. Julian, retiring president of the Rubber Exchange of New York, in his annual report to members presented at the recent annual meeting of the Exchange.

"General business conditions continued unfavorable during most of the past year," the report says, "and further declines in crude rubber prices were made; a low for all times being reached on June 28, 1932, when No. 1 Standard contract sold at 2.53c for July delivery. However, in July there was an upward turn and the volume of trading on the Exchange increased; the turnover in August being 61,930 tons, the largest for any month since March, 1929, and 76 per cent of the turnover in March, 1928, which was the most active month in the history of the Exchange.

"The matter of restriction of rubber output continued to be the subject of conferences between British and Dutch interests and their governments. However, on March 19, 1932, an official statement by representatives of the British and Netherlands governments announced that after a careful review of the situation the British and Dutch governments had been forced to the conclusion that under existing conditions it was impossible to frame and operate an international scheme which would guarantee effective regulation of the production and export of rubber. Consequently there still is a free and open market with respect to rubber.

Over Production Hurts Market

"Production and shipments of the British and Dutch Colonies were maintained at practically the former rates until the first half of 1932, when the native production in the Dutch East Indies fell off about 43 per cent compared with the first half of 1931, while the decrease in native production in the British sections was less marked.

"Estate production and shipments in British Malaya and the Dutch East Indies show few signs of reaction since abandonment of the restriction proposals. Although tapping on large areas has been stopped, the exports of estate rubber from the Dutch East Indies remained at about the same level as in 1931 until August, while in British Malaya the estate production was slightly above the 1931 level which indicates more intensive tapping on the remaining tappable areas.

"Consumption in the United States declined further during the past twelve months, whereas the total foreign consumption during that period somewhat exceeded previous levels.

"The principal world stocks of crude rubber increased about 94,000 tons from August 31, 1931, to May 31, 1932. Since the latter date, there was a decrease up to the end of July with a slight upward turn in August, and at August

Operating Income and Expenses of the Rubber Exchange of New York, Inc.

For the Year Ended August 31, 1932

INCOME:			
Arbitration Fees		$ 5.00	
Commission on Ticker Service		1,554.31	
Dues		51,000.00	
Exchange Telephone Booth Receipts		3,792.50	
Fines		10.00	
Initiation Fees		3,900.00	
Interest on Bank Balances		165.30	
Interest on Investments		5,950.00	
Telephone Clerks' Fees		175.00	
Inspection Bureau:			
Income	$9,961.06		
Less Expenses	4,570.97	5,390.09	
Total Income			$71,942.20
EXPENSES:			
Administrative Expenses		$ 232.35	
Advertising and Publicity		1,041.66	
Daily Market Reports	$2,363.25		
Less Sales	1,024.63	1,338.62	
Insurance		187.52	
Legal Expenses		6,396.00	
Postage		767.49	
Printing and Multigraphing		1,261.05	
Rent and Light:			
Office	$2,400.00		
Exchange	10,666.43	13,066.43	
Salaries and Wages		30,278.79	
Special Government Taxes		13.87	
Stationery and Supplies		272.98	
Telegraph and Cables		5,176.56	
Telephone			
Office	$ 427.13		
Exchange	287.19	714.32	
Ticker Service		2,274.28	
Miscellaneous Expenses:			
Office	$ 273.01		
Exchange	1,153.35	1,426.36	
Total Expenses			64,448.28
EXCESS OF INCOME OVER EXPENSES FOR THE YEAR			$7,493.92

31, 1932, the principal world stocks were about 46,000 tons higher than at August 31, 1931."

Volume of trading on the Exchange during the year amounted to 258,202½ long tons, of which 234,920 long tons were transacted in the No. 1 Standard contract, 20,500 tons in the No. 1B Standard, 50 tons in the AB contracts, 1,610 tons in the A contract, and 1,122½ tons in the old A contract.

On the basis of the Standard contracts, prices fluctuated between a high of 5.97c, reached on September 11, 1931, and a low of 2.53c paid on June 28, 1932. During the year thirteen applicants were elected to membership. The present membership totals 255.

Charles Slaughter, prominent in New York's commodity markets, was elected president of the Rubber Exchange of New York, Inc., on October 18, in the annual election of Officers for 1932-1933. Mr. Slaughter, a member of the firm of Slaughter, Horne and Company, active in crude rubber, coffee, sugar and other commodities, succeeds John L. Julian, whose second term as head of the Exchange expires on October 20th.

Re-elected in the balloting by the membership were William A. Overton and J. Chester Cuppia, both of whom succeed themselves as vice-president and treasurer, respectively.

The following were elected to serve again on the board of governors: Harry A. Astlett of H. A. Astlett and Company; Harold L. Bache of J. S. Bache and Company; Robert Badenhop of R. Badenhop Corporation; William E. Bruyn, of Littlejohn and Company, Inc.; James T. Bryan of Logan and Bryan; John L. Julian of Fenner, Beane and Ungerleider; Marcus Rothschild of M. Rothschild and Company, Inc.; Samuel Swerling of Swerling Trading Corporation; and Charles T. Wilson of C. T. Wilson Company, Inc.

The following new governors also were elected: Robert L. Baird, associated with H. Hentz and Company; Otto Meyer, of the Meyer and Brown Corporation; and Lawrence G. Odell, of Odell and Sons.

Plastic Rubber Flooring

ONE OF the most interesting exhibits in the pavilion of the Rubber Growers' Association at the recent Building Exposition, at the Olympia, London, was that devoted to the new type of Terrazzo and Mosaic rubber flooring, laid like cement or asphalt—the invention of A. E. Bond.

Hitherto the basis of rubber flooring has been ordinary crude rubber which undergoes drastic milling or mastication involving the use of expensive machinery; the Bond process has made it possible to produce a perfect rubber floor covering direct from latex, preferably in concentrated form, and it is interesting to note, in passing, that the Terrazzo floorings on exhibit at Olympia have been produced by the use of creamed latex as prepared on certain rubber estates in the East under the direction of the Rubber Research Institute of Malaya.

To this latex compounding ingredients are added and the water portion of the latex chemically dehydrated in order to form a stiff paste. The rubber terrazzo and mosaic effects are obtained by the use of vulcanized sheet rubber cut into small stone-like shapes and incorporated in the plastic composition which is, while still plastic, spread or trowelled direct on to the surface to be covered, in exactly the same manner as the Italian workmen spread the cement terrazzo. This composition sets or hardens within 24 hours at ordinary atmospheric temperatures, and is then ground or polished off, leaving a smooth decorative all-rubber surface. Any particular design, pattern, or artistic and decorative effect can be readily obtained by cutting the pieces the size desired and placing them in position and a wide range of color schemes is made possible by the choice of a variety of colors.

In place of vulcanized rubber pieces as described above, marble chippings or colored stones, as employed in producing the ordinary cement terrazzo flooring, can be used and embedded in the plastic rubber compound instead of cement. Pieces of metal, colored glass, or other suitable decorative material can also be incorporated in order to produce decorative or artistic effects. The use of a rubber bedding instead of a cement foundation for ordinary terrazzo and mosaic floorings offers several advantages, which the architect will quickly appreciate. The rubber bedding is warmer, it deadens the tread, but above all it imparts to the floor a degree of resilience or "give" which is impossible to obtain in cement, and thus obviates cracking, a disadvantage and disfigurement so prevalent in all cement terrazzo and mosaic floors and one which completely spoils the artistic effect. The rubber bedding overcomes this greatest of all drawbacks to terrazzo and mosaic floors and makes it possible for the floorings to stand up successfully to the effects of vibration and also the effects of both heat and cold in the buildings.

Rubber Floor Installation

Floors have been laid commercially in and around London, in restaurants, hotels and clubs, also in private residences, by practically unskilled labor. Amongst other places where this rubber flooring has been laid are: the J. P. Restaurant, Farringdon Street; the Alexandra Hotel, Knightsbridge; Nestle's Building, Eastcheap; and elsewhere around London.

A test floor was laid some time ago by the North British Rubber Company at the Castle Mills, Edinburgh, and has proved a great success.

The Bond process is protected under patents in this country and abroad, and the North British Rubber Company have the sole right to grant licenses to operate the invention in Great Britain.

Officers of the Rubber Section National Safety Council

Elected at 1932 Congress

General Chairman—CHARLES F. SMITH, *U. S. Rubber Reclaiming Company, Inc., Buffalo, N. Y.*

Vice-Chairman (in charge of program)—H. W. LOW, *Miller Rubber Products Company, Inc., Akron, Ohio.*

Secretary—R. A. BULLOCK, *Corduroy Rubber Company, Grand Rapids, Mich.*

Poster Committee Chairman—ROLAND KASTELL, *United States Rubber Company, Passaic, N. J.*

Membership Committee Chairman—E. W. Beck, *United States Rubber Company, New York, N. Y.*

Publicity Committee Chairman—W. L. SCHNEIDER, *B. F. Goodrich Company, Akron, Ohio.*

Statistics Committee Chairman—R. W. MORRIS, *Firestone Tire and Rubber Company, Akron, Ohio.*

Engineering Committee Chairman—JAMES Q. LEE, *India Tire and Rubber Company, Akron, Ohio.*

Health Committee Chairman—DR. J. NEWTON SHIRLEY, *Watertown, Mass.*

Slides and Safety Kinks Committee Chairman—A. M. DIETZ, *Pennsylvania Rubber Company, Jeannette, Pa.*

News-Letter Editor—B. F. GERPHEIDE, *Goodyear Tire and Rubber Company.*

The Manufacture of HARD RUBBER DUST*

By HARRY MCCORMACK

A FACTORY producing a variety of hard rubber articles frequently finds it desirable, in compounding a stock for the hard rubber, to have an appreciable amount of hard rubber dust in the compound. This method of operation has several advantages: It offers an outlet for the hard rubber scrap, coming from the factory's manufacturing operations, by converting the hard rubber scrap to dust; it assists in securing complete and rapid vulcanization of the hard rubber article and produces a rubber stock which is easier to form.

A factory, operating in conformity with the description just given, was utilizing old inner tubes as a cheap source and as the chief source of rubber entering into the production of hard rubber dust. The process employed in making the dust at the inception of the investigation herewith described involved the following operations:

1. Disintegration of the old inner tubes by milling on rubber rolls.
2. Breaking down washed Para sheets.
3. Mixing Para sheets with reclaim.
4. Compounding mixed rubber with sulfur.
5. Stock sheeted out 1 inch thick.
6. Vulcanizing in trays in a pressure vulcanizer for 14 hours.
7. Vulcanized slabs broken up with a hammer by hand.
8. Pieces broken down on rolls to pass a No. 12 screen.
9. Screenings ground in a Raymond impact mill to approximately 100 mesh, classification by air separation accompanying the grinding operation.

The ground classified product was then ready for use after nine operations from raw materials to finished product.

The stock used in making dust was:

	Pounds
Ground tubes	660
Sulfur	420
B soap oil	120
Para sheets	120
Reclaim rubber	180
Total	1500

The system of vulcanizing used at that time necessitated the milling of this stock in the same manner as would be required for the milling of a rubber stock intended for the production of a finished molded article.

Crude Rubber in Compound

The rubber in the compound (Para sheets and reclaim) was necessary as a binder for the remaining components of the stock, as the old inner tubes had lost almost completely their elasticity and plasticity.

A brief study of these operations, together with their cost, led to the definite conclusion that a better process for making rubber dust had to be evolved; otherwise the factory could not afford to make and use the material. A series of laboratory experiments, using only rubber and sulfur in the mixture, gave indications that, under proper conditions of operation, a satisfactory vulcanization could be secured. These experiments demonstrated that one of the essentials for a satisfactory process would be the mixing of the sulfur with the rubber when both had been raised to a temperature at which they would be plastic.

Equipment Used in Operation

A further study of the operation indicated the selection of a mixer and vulcanizer in which the material could be heated with fairly close temperature control, and where the material would be continuously stirred while being heated; it was also found that operating under a vacuum was desirable. An investigation of the equipment on hand in the factory, which might be found to function satisfactorily, disclosed a vacuum rotary drier (made by the Buffalo Foundry and Machinery Company) which was not then in use. This equipment seemed to possess the characteristics desired, and it was decided to attempt to use it as the mixer and vulcanizer.

The machine was size R3, 3 feet in diameter by 10 feet long; it could be operated satisfactorily with a charge of 2,000 pounds of disintegrated tubes together with the required amount of sulfur.

Maintaining a temperature of 340° F., satisfactory vulcanization could be secured from 4.5 to 6 hours. The vulcanizer was kept under a vacuum of approximately 22 inches for the major portion of the time. It was noted, however, that after vulcanizing about 3 to 3.5 hours, there was a marked rise in temperature of the material being vulcanized and, accompanying this, a copious evolution of hydrogen sulfide. The rise in temperature, along with the gas evolved, completely destroyed the vacuum at times.

The stream to the vulcanizer was shut off at the conclusion of the vulcanizing period but the stirring was continued during the cooling of the material in the vulcanizer.

The material, when cool, was finely granulated and in such condition as to pass directly to the Raymond impact pulverizer for the final grinding.

Factory Operations in the Process

The materials charged into the drier for vulcanizing consisted of 2,000 pounds of ground tubes and 1,200 pounds of sulfur. No other materials were added, nor were others necessary.

The operations in this system of procedure were:

1. Disintegration of the tubes.
2. Vulcanization.
3. Fine grinding, accompanied by air separation.

Three operations were used in place of nine as in the original process. The total time necessary for the new process was 8 hours, as compared with 2 days and 1 night on the process it replaced.

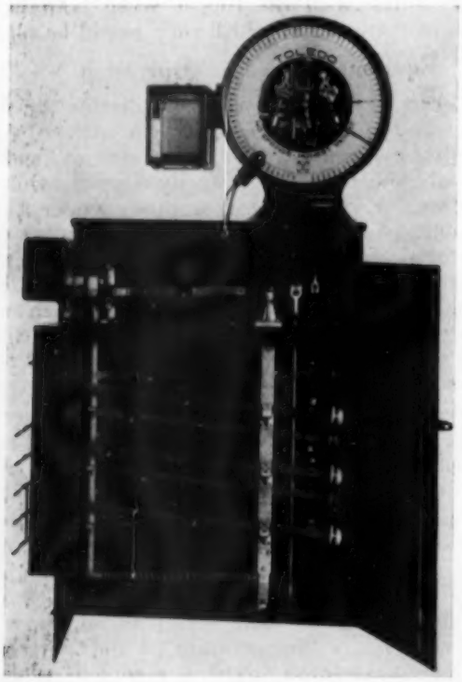
The savings represented by the change in process amounted to 50 per cent of the cost of the rubber dust.

*Note: Reprinted with acknowledgment from *Industrial and Engineering Chemistry*, October, 1932.

Automatic Batching Equipment

THE new Toledo automatic batching equipment, recently developed by Toledo Precision Devices, Inc., Toledo, O., reduces the batching of materials to a cycle of lever and button operations which can be performed by unskilled labor. This new assembly consisting of a Toledo scale equipped with a photoelectric tube, a lever system and a set of beams, makes the batching operations practically automatic, and at the same time achieves greater accuracy and reduces the time required.

The tank or hopper where the batching takes place is mounted on a special assembly on the scale platform. There is a set of beams, one for each ingredient which enters the mix. These beams are regulated by a system of hand levers on one side of the scale. Buttons control the starting of the flow of materials. When the desired weight has been placed on the scale, the photoelectric relay stops the flow. Attached to the head of the scale is a graphic recorder.



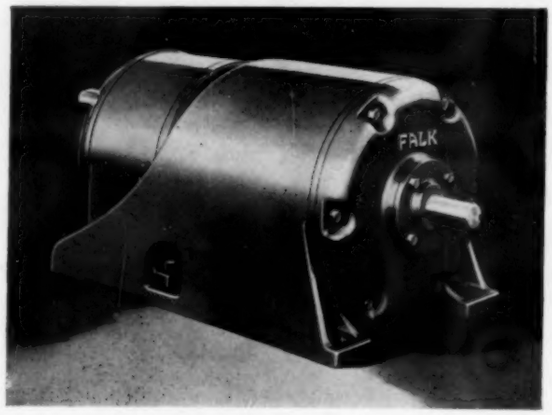
This provides a checking record for every ingredient which enters the tank, and hence a constant guard against mistakes.

The equipment is simple to operate. Each beam is set for the correct amount of the ingredients which are to enter the mix. Once the beams are thus set, the following operations are practically automatic. The operator turns down the first handle, which throws the beam for the first ingredient into the lever system. He then walks on the other side of the scale and presses the button for that ingredient. This starts the flow of material. While walking from one side of the scale to the other, the indicator has sufficient time to come to equilibrium. The first ingredient starts to flow into the tank, and the indicator starts to return to zero.

While this ingredient is flowing into the tank, a light beside the button burns brightly. When the necessary amount has entered the tank, this light dims. Hence, by glancing at these lights the operator can immediately tell how many ingredients have already been put into the mix, and whether any ingredient is flowing into the tank at that instant. The same operation is followed for each ingredient until the batching is complete. Afterwards, inspectors can check each batch by the graphic record which is provided.

Motoreducers

THE Falk Corporation, Milwaukee, Wisconsin, announces three styles of "Motoreducers" (combined motor and speed reducer) which represent a distinct departure from previous practice. These "motorducers" retain all the advantages of separate motors and speed reducers and, at the same time, give increased compactness,



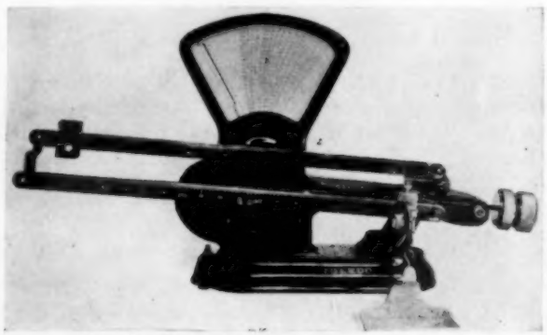
simplicity and economy. The gear housing in every case acts as a support for the motor, thus assuring the necessary rigidity.

In the "Integral" type the motor end bell is removed and the motor close coupled through a bayonet type of joint to the gear case. In the "Flexible" type the round frame type of motor is used and the end bell retained. In the "All-Motor" type any standard horizontal type motor may be used, the motor being connected through a Falk flexible coupling to the reducer housing.

Variation Auto-Gage

IN MANY industries manufacturers have had difficulty in measuring changes in the physical characteristics of materials during processing, or before shipment and after receipt. Recently, however, Toledo Precision Devices, Inc., has developed the Toledo Variation Auto-Gage which has various applications in the rubber industry as it measures and indicates the increase or loss of any physical property in any material. Increases or decreases in elasticity specific gravity or moisture are quickly shown. It will determine the percentage of volatiles which can be driven out of the material in question. It can be used to advantage in measuring the elasticity of rubber.

This device can be furnished with any chart needed,



with calibrations in per cent, elasticity, specific gravity, pounds and ounces. Any special commodity container can be supplied. The weight of the containers used can be tared out. Two sizes are available for samples from two ounces to three pounds and for samples four ounces to six pounds.

CAN America Profitably Compete with CHEAP FOREIGN RUBBER GOODS?

By FREDERICK J. MAYWALD

***Editor's Note*—The following viewpoint may be of interest to some of our readers. The author's contention that there is an immediate demand for cheaper and poorer quality goods is possibly correct. While the Editor of "The Rubber Age," in the light of the recent importation of cheap Japanese footwear to the obvious prejudicial interests of the American rubber footwear trade, cannot subscribe to the author's views, he is glad to present an opinion which undoubtedly merits consideration. The standpoint of "The Rubber Age," however, has already been expressed editorially in its issue of June 10, 1932, and after all circumstances have been considered it must still maintain that attitude, namely, the advocacy of adequate tariff protection for cheap foreign rubber goods. The attitude, incidentally, has had the support of the U. S. Tariff Commission in its recent hearings, which doubtless will result in a ruling that will prevent further influx of Japanese tennis shoes which were retailed at the low rice of 20 cents per pair through one of the larger chain 5 and 10 cent stores. Further hearings before the Tariff Commission are scheduled for November 29. At all events, the author propounds a highly controversial question.**

BEFORE the publication of the article which appeared in a recent issue of this publication,* I got into a discussion with a gentleman (who by the way was not a rubber manufacturer), as to the productivity of American labor and our ability to meet what he called the competition of cheap foreign labor. My claim was that we could manufacture any article in this country as cheaply as it could be manufactured in any foreign country regardless of the low wage scales of foreign labor. My contention has been borne out by a recent publication of one of the United States Departments which showed by actual tables the production costs of given articles on the basis of cheap foreign labor, as such articles are manufactured under home conditions, and our own costs of production on the basis of the higher costs of American labor. My contention has always been that the greater skill of American labor, aided by American mechanical equipment and ingenuity, will produce more goods of better quality per employe than will the underpaid foreign employe.

The greatest trouble with American manufacturers is the fact that they do not keep up with foreign competitors on research and development of economical methods of production. Also in many cases they remove the incentive to increased production by cutting wage scales and piecework rates as soon as the employe shows an increase of production. A recent experience will illustrate this point. A certain manufacturer of small rubber articles had his employes all working on a piece-work rate. He requested that I cut his manufacturing costs. He could not change his compounds materially. Therefore the only chance of cutting costs was by cutting the length of his cures. His articles were being cured in from 12 to 15 minutes. I managed to revamp his compounds sufficiently to permit the cutting of his time of cure from 15 minutes down to periods of 4 to 6 minutes.

The manufacturer was delighted because his presses

*THE RUBBER AGE, (N. Y.), Sept. 25, 1932, p. 480.

Japanese vs. American Goods in Competition

IN SOMEWHAT contradiction of the economic arguments advanced by the author of the above article, *The New York Times* has noted the contrasts in costs between American and Japanese rubber merchandise, and questions the practicality or desirability of competing against such wage scales. We quote from its recent editorial comment on the subject, voiced in connection with the pending hearings which are being held before the Commissioner of Customs:

"The Senate Finance Committee at Washington is staging an exhibit of 300 imported articles to illustrate the destructive competition which American labor encounters in foreign cheap labor. From the list of comparative costs issued by the Commissioner of Customs we quote a number of items for the purpose of asking a question that has nothing to do with high and low tariff. It concerns us exclusively at home. Thus:

	Landed Cost in U. S. Currency	Domestic Cost of Similar Article
Swimming ring (Japan)	.19 each	.45 each
Swimming float (Japan)	.17 each	2.46 each
Rubber animal (Japan)	1.75 doz.	3.96 doz.
Beach ball (Japan)	.12 each	1.47 each
Beach ball (Japan)	.10 each	.41 each
Rubber football (Japan)	.07 each	.15 each
Beach ball 13 in. (Japan)	.08 each	.27 each
Rubber animal (Japan)	3.64 gro.	14.12 gro.
Rubber toy (Japan)	.84 doz.	2.28 doz.

"To produce a swimming ring in Japan and ship it to this country costs 19 cents, and to produce the same swimming ring here costs 45 cents, or about two and a half times as much. But to produce a swimming float costs 17 cents in Japan and $2.46 here, or about fifteen times as much. We may put it another way. In Japan it costs about the same to produce a swimming ring and a swimming float, 17 cents and 19 cents. But in the United States it costs nearly six times as much to produce a swimming float as a swimming ring—$2.46 against 45 cents.

"They make two kinds of beach ball in Japan, at 10 cents and at 12 cents. Over here it costs us 41 cents to duplicate the Japanese 10-cent ball, but it costs us $1.47 to duplicate the Japanese 12-cent ball. A 4-to-1 handicap becomes a 12-to-1 handicap. Why? Rubber toy (Japan) sells at 84 cents a dozen and the same American article sells at $2.28 a dozen, about two and a half times as high.

"But rubber animal (Japan), which sounds very much like rubber toy (Japan), sells at $3.64 a gross, and the same American article sells at $14.12 a gross, nearly four times as high. Why?

"How can any tariff adequately protect American manufacturers and distributors if they have a cost spread from 45 cents to $2.46 on two articles which Japan produces at a spread from 17 cents to 19 cents; or a cost spread from 41 cents to $1.47 on two articles on which the Japanese spread is from 10 cents to 12 cents? If the figures in the list are correct, doesn't it suggest that the one thing which needs looking into is not the tariff but American industrial management?"

could turn out more than twice as much per hour as they had been doing previously. He at once cut his piece-work rate more than 60 per cent and I could not make him realize that his press-men and packers were producing and handling more than twice as much raw and finished material per hour as they had been before and therefore were entitled to at least part of the saving. The result of this action was that the manufacturer not only lost his press-men, as well as some of the other employes, but also lost his superintendent, and had to make an entire new start. I wonder how many of my readers would consider the action of this manufacturer as "good business?" *Personally I think it was anything but good business.*

In another instance I had a man come to me who wanted to have a very considerable number of pieces of finished rubber goods manufactured per month, and asked me to find a manufacturer who would produce these goods for him. I went to one of the smaller plants and laid the proposition before the proprietors. Although this plant was only working two or three days a week, and the new contract, if they secured it, would mean a sixteen-hour day for five days a week with the usual Saturday full day, I was promptly met with the statement that the factory could not afford to go on a sixteen-hour scale as that meant two shifts and going on two shifts was too much trouble as they did not have the necessary supervising force to handle this increased business. I was further told that they were old-fashioned enough to believe that working two shifts a day was bad business, and I could not make them see that by working their equipment twice as many hours per day, or really about four times as many hours per week as they were doing at the present time, they were cutting overhead costs, for their equipment would be kept busy just four times as long.

I could give any number of instances of this sort to prove my argument as to why American manufacturers do not successfully compete with foreign labor. I have yet to see any article of foreign manufacture which we could not produce in this country just as cheaply and of better quality in most cases, if the plant management were not in a rut.

Demand for Low Priced Goods

Furthermore, many manufacturers do not like the idea of producing and selling a cheaper grade of article than they have been accustomed to, forgetting the fact that at the present time people are not going to pay the prices they paid prior to 1929, either because they do not happen to have the money which would enable them to buy these higher-priced articles, or because they do not know what is coming and consequently do not want to spend any more money than they have to. These manufacturers are afraid that they will disturb their own future markets, yet at the same time they forget that they have little or no market for the goods which they are accustomed regularly to produce, with the consequent result that they have thrown thousands of men and women out of employment who might have been kept at work by following the market trend.

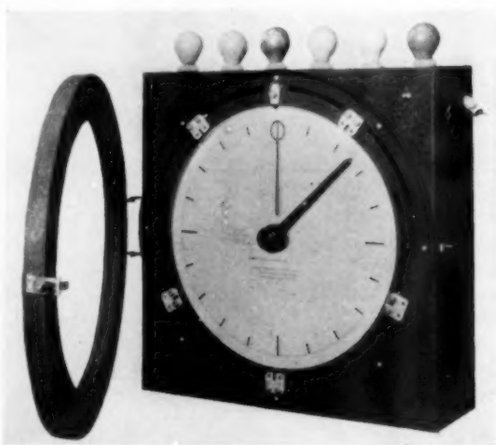
They have not the vision that a client of mine had during the early days of the war. Tire companies at that time, of course, were rampant and existed in every small town. One rather large producer of tires, through force of circumstances at the beginning of the war, during the period of allotment of rubber, found himself in the position where he could obtain no rubber. By coincidence his coal supply had been seized by the State during the two months which were used as the basis of the determination of allotment of rubber and consequently he had to shut his plant down for lack of fuel. When the allotment came he was calmly informed that as he had not been operating during the period used as the basis of the determination of production, he was not entitled to receive any rubber and consequently would have to shut his plant down. Fortunately, for him, he ran into a contractor who had succeeded in securing an army contract for tires, but who like some Government contractors had no plant of his own. This tire manufacturer was offered all the rubber he needed provided he would operate his plant for the contractor on the basis of cost of production plus a profit of $1.00 or so per tire. As the lesser of two evils he entered into the contract and operated his plant at least at some profit instead of having it entirely idle and losing its upkeep besides.

If American manufacturers as a whole would bear this picture in mind, and many of them, particularly the smaller ones, would spend a little money on research work in having their formulas or methods of production revamped so that output could be increased per unit, it would soon be found that many factories could increase their profits over present incomes.

Telechron Operated Timing Device for Banbury Mixers

THE PURPOSE of this device, which is being offered to the industry by Farrell-Birmingham Company, Ansonia, Conn., is to provide a means of signalling to the operator by flashing a light, supplemented by ringing a bell or gong, if desired, as various stages of the mixing operation are completed, thus insuring uniformity of procedure necessary for the compounding of stock.

When the period of time has been determined for the duration of each successive stage, and the time of completion of operation has also been established, the paper chart, which is inserted in the face of the telechron timer, can be



Telechron Timer

marked at the intervals where it is desired to flash a signal. The contact points can be set to correspond to the marking on the paper chart and the cover of the instrument closed and locked. Thereafter, until changed, the instrument will signal as desired, it being only necessary for the operator to set the pointer at zero at the beginning of each batch.

The electric circuit is arranged for 110 volts, a telechron motor being used to drive the mechanism, with a switch for disengagement. The transformer to provide 110 volts, single phase current is connected to the primary circuit of the Banbury mixer motor so that the telechron motor driving the instrument will stop if power fails. The lights furnished with a standard instrument are of varied colors for distinguishing the different stages of the process.

New Standard Specifications for Rubber SURGEONS' GLOVES

UNDER date of February 23, 1931, the American Hospital Association, through John M. Smith, chairman of its simplification and standardization committee, requested the assistance of the Bureau of Standards in the establishment of a commercial standard for surgeons' rubber gloves.

The Bureau of Standards then submitted a tentative specification drafted by the above committee to the Rubber Manufacturers Association for comment.

At a meeting of manufacturers called by the Rubber Manufacturers Association and held in Akron, O., on February 17, 1932, this specification was discussed in detail and a few minor changes were recommended. Following the approval of the committee of the American Hospital Association, the specification was circulated to the entire industry for acceptance.

To represent the industry in the consideration of any suggested revisions, and in other ways to promote adherence and enhance the value of the standard, the American Hospital Association and the Rubber Manufacturers Association have appointed a standing committee composed of representative users, distributors, and producers. The membership of this committee is given below:

Asa S. Bacon (chairman), superintendent, Presbyterian Hospital, Chicago, Ill.
Dr. George O'Hanlon, director, Jersey City Hospital, Jersey City, N. J.
John M. Smith, director, Hahnemann Hospital, Philadelphia, Pa.
G. W. Wallerich, treasurer, V. Mueller and Company, St. Louis, Mo.
T. A. Furcht, Seamless Rubber Company, New Haven, Conn.
C. D. Hubler, Faultless Rubber Company, Ashland, O.
Mrs. L. E. Hankins, Hankins Rubber Company, Massillon, O.
F. W. Reynolds, ex-officio secretary, Bureau of Standards.

Commercial Standard

Scope

1. This specification covers minimum requirements for material and workmanship of surgeons' rubber gloves.

Weights and Sizes

2. Gloves shall be supplied in medium and heavy weights and sizes 6 to 9½, inclusive. (See Table 1.)

Material and Workmanship

3. Gloves shall contain at least 95 per cent by volume of best quality new wild or plantation rubber, and shall be free from coloring matter or fillers, reclaimed rubber, or substitutes. The surface shall be smooth and free from ingrained particles, blisters, thin spots, or other imperfections.

General Requirements

4. Gloves shall have a rolled or banded wrist.

(Manufacturers recommend the rolled wrist, which will be regularly supplied unless the banded wrist is demanded.)

5. *Tensile Strength.*—The tensile strength of medium weight gloves shall be at least 2,700 lbs./in. The tensile strength of heavy weight gloves shall be at least 2,400 lbs./in.

6. *Elongation.*—The ultimate elongation shall be at least 600 per cent (1 inch to 7 inches).

7. *Resistance to Sterilization.*—A sample shall be wrapped in gauze and subjected to five successive sterilizations in steam at 15 pounds pressure for periods of 15 minutes each, with intervals of 20 minutes between sterilizations. Test strips shall remain at room temperature for 24 hours before being tested. The tensile strength after this test shall be not less than 1,500 lbs./in. on mediums and 1,200 lbs./in. on heavies.

Detail Requirements

8. The length, width, and weight of gloves shall conform to the following table:

MEASUREMENTS AND WEIGHTS OF SURGEONS' RUBBER GLOVES

Size number	*Length from tip of middle finger to end of gauntlet, minimum*	*Circumference of palm at a point between base of index finger and thumb (±5 per cent)*	*Weight per dozen pairs*	
			Medium (minimum)	*Heavy (minimum)*
	Inches	*Inches*	*Ounces*	*Ounces*
6	10	6	8¾	11¾
6½	10	6½	9¾	12¾
7	10	7	10¾	13¾
7½	10½	7½	11¾	14¾
8	10½	8	13	16
8½	10½	8½	13¾	16¾
9	10½	9	14¾	17¾
9½	10½	9½	15¾	18¾

Marking

9. Each glove shall be marked with the manufacturer's or supplier's name or trade name.

10. Each package containing gloves conforming to this commercial standard shall carry a label which may read as follows: "These gloves are certified to conform to all requirements of the Commercial Standard for Surgeons' Rubber Gloves CS40-32. (Signed) ————."

11. In lieu of the above certification the words "conforms to CS40-32," or other identification which may later be approved by the industry, may be substituted to conserve space. The use of this inscription shall indicate that the manufacturer (or supplier) subscribes to the above guarantee.

The committee also decided that they would make separate commercial standard specifications for surgeons' latex gloves (CS41-32). The only changes made in this connection from the above standard specifications were in the case of latex gloves, that they may be made directly from liquid latex and the tensile strength should be at least 3,500 lbs. per square inch. The ultimate elongation of latex gloves were increased to at least 820 per cent (1 to 9.2 inches).

The measurements and weights of surgeons' latex gloves shall conform to the following table, in accordance with the new specifications:

Size number	*Length from tip of middle finger to end of gauntlet, minimum*	*Circumference of palm at a point between base of index finger and thumb (±5 per cent)*	*Weight per dozen pairs (minimum)*
	Inches	*Inches*	*Ounces*
6	10	6	7¾
6½	10	6½	8¼
7	10	7	9
7½	10½	7½	9¾
8	10½	8	10¾
8½	10½	8½	11½
9	10½	9	12¼
9½	10½	9½	13

Objections to "Doughnut" Tires

THE way of the "doughnut" tire has not been a smooth one. While sales departments of tire manufacturers are exhibiting all possible sales enthusiasm, according to James W. Cottrell in *Automotive Industries,* July 16, 1932, the automotive engineer is remaining skeptical and at times militant against the new type of tire.

Many engineers liken the present situation to that in 1923 and 1924 when balloons were very much in the minds of engineers and the public. Arguments in favor of balloons then were the same as those advanced on behalf of "doughnuts" now. At the time reduction in tire pressure was carried too far and there was a retreat.

Much good will come from the present "doughnut" tire agitation, just as good resulted from the 1923 experiment, in the opinion of many engineers. As a result of stirring up of the whole question, better riding qualities will be developed. Engineers are not at the end of their resources in improving balance, weight distribution, springing, shock absorbers, seats and other parts contributing to comfort.

Of the objections to "doughnut" tires, three are basic in nature, and, therefore, in the opinion of many engineers, entitled to special consideration. They are:

1. There is a definite lag in steering.
2. Cars so equipped are unstable at both front and rear because hubs may move an inch or so in three dimensions without appreciably displacing circumferences of the tires or causing them to deviate from their course.
3. Features of greater useful value to car owners than the "doughnut" tires can be supplied for the extra cost of new style tires plus the cost of changes in cars necessarily accompanying their adoption.

In addition to the basic objections to general adoption of large "doughnuts," tire and passenger car engineers condemn the newcomers on many other charges, to wit:

They throw passenger car design out of balance by emphasizing tires to the exclusion of other features.

New steering systems required must possess the directly opposing qualities of high efficiency and great dampening ability.

Space available for brakes is further reduced.

Better traction will impose greater braking stresses.

Fenders must be redesigned.

Shock absorbers of different characteristics must be employed.

Unless tread is widened there will be less room in rear seats.

Wheels will be about 30 per cent heavier.

Cost per mile is greater, at least at present.

Nearly every car on which "doughnuts" have been tried has developed front-end "nervousness."

Cars which ride well with balloons are not improved by "doughnuts."

Top speed and acceleration are reduced.

Gasoline consumption is increased.

The car is retarded when transversing rough spots.

Air pressures must be maintained within one pound of specified amount, which is much less than the change in pressure taking place because of heating of the tire at high speed.

Safe Tire Mileage

THERE is a startling difference between the amount of safe mileage and the total mileage which an automobile tire delivers, it was revealed by the United States Rubber Company in a recent survey involving inspection of thousands of leading makes of tires on owners' cars in all parts of the United States.

Safe mileage is regarded by tire engineers as those miles driven before the tire tread wears smooth. Total mileage, of course, represents the number of miles obtained from the time the tire is put on the car until it is discarded.

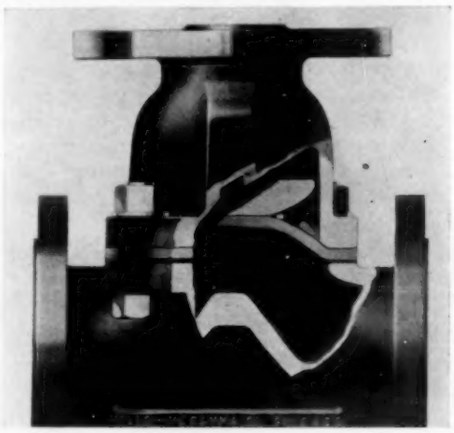
However, in driving on a smooth tread the motorist loses the traction provided by the original design and thereby increases the danger of slipping and sliding on wet or icy streets. He also increases the chances of having a puncture or blowout, with its attendant inconvenience and possible disaster. A large percentage of tires on the road today, the survey showed, have worn past the point of safety.

Rubber Lined Valves

HARD and soft rubber lined valves of the rising stem type are being introduced by the Hills-McCanna Company, 2349 Nelson Street, Chicago, Ill. Valves with bodies made of rubber are also available.

The valves are used for handling air, volatile substances, hot or cold water, solids in suspension and a large number of corrosive liquids.

Leaks due to wire drawing, scale and other foreign particles settling between the seats are eliminated. This is accomplished by providing a diaphragm that forms to the seat, making a perfect leak-proof joint under all conditions.



At no time does the liquid handled reach the bonnet of the valve, or the working parts. This is a feature when handling gases, materials of a searching nature and liquids having solids in suspension. The protected working parts assure a free-operating valve, regardless of substances handled. No stuffing box is necessary.

Replacing a diaphragm requires less time than that necessary to replace the stem packing or seats on other valves. Changes are made without taking the valve from the line. Diaphragms are made of rubber compositions that are resistant to wear, abrasion and a number of corrosive liquids. They are not recommended for services where the temperature is above 180° F. Cold pressures up to 150 pounds can be handled successfully.

Danish Concession in Liberia

FIRESTONE Tire and Rubber company officials have refused comment on development which bid fair to place control of the African Republic of Liberia in the hands of a League of Nations protectorate.

Firestone, through Firestone Plantations, Incorporated, is the largest business organization in Liberia, and controls, by concession, a million acres of Liberian rubber-growing land and jungle.

While details of the Liberian control arrangement are being worked out, the League of Nations is considering an application for a concession competing with Firestone to a degree, by the Danish-Liberian Syndicate, group of Danish financiers.

EDITORIAL COMMENT

The Present Position of the Industry

RUBBER consumption in 1931 dropped to the lowest point since official figures first were compiled in 1925, the total of 250,000 long tons comparing with the 1930 consumption figures of 376,000 long tons. For the first nine months of the current year, consumption in long tons has receded to 275,220, in contrast to 281,039 in 1931, and 299,100 in 1930 for the same nine months' period, while imports for the comparative nine months of 1932, 1931, and 1930 were 314,534, 357,632, and 367,542 long tons, respectively. Stocks on hand at the end of September are placed at 365,789 long tons, which brings the total to a new high level, as stocks of crude rubber on hand at the close of 1931 were approximately 322,000 long tons, which constituted the previous record, having risen from 201,000 long tons at the close of 1930, according to the survey of the rubber industry which has just been completed by R. G. Dun and Company.

"Almost two-thirds of the world's supply of crude rubber is turned into finished products in the United States," the survey continues, "and of this amount nearly three-quarters goes into the production of tires, tubes, and tire accessories for automobiles, motorcycles, and bicycles; the balance enters into the manufacture of rubber heels, rubberized fabrics, mechanical rubber goods, rubberized and rubber clothing, and druggists' and stationers' rubber goods. As automobile production and sales have declined more than 40 per cent from the 1931 total, the original equipment business has been reduced sharply. In addition, replacement purchases are subnormal for the third successive year. Further handicaps to the progress of the tire division have been furnished by price-cutting by mail-order houses, and the large discounts granted to aid retailers and factory-owned stores.

"Rehabilitation programs recently started by many industrial concerns, in order to conserve their plants and partly in anticipation of further business expansion, have been reflected in the production and distribution of mechanical rubber goods. Call for replacement needs, principally hose and belting, have picked up materially, and new installation contracts are larger in proportion. The low prices, which have prevailed for some time, are continuing, but there is an upward tendency on certain grades.

"Conditions in the retail division have been less favorable. During the past six months sales have declined approximately 30 per cent, by comparison with the total volume of business transacted in the same period last year. Spring and summer weather was too dry to favor a free movement of rubber clothing and footwear, but bathing goods have contributed to a substantial part of the sales. Retailers have good-sized carry-over stocks of rubber footwear, but this department now is approaching the season of the year when sales should show a marked improvement.

"The insolvency record of the rubber industry has been somewhat more favorable than it was last year, at least in the manufacturing division. Although there were eleven defaults recorded for manufacturers during the first eight months of the current year, as compared with eight for the entire twelve months of 1931, the total of the involved liabilities was less by $1,046,287."

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General Manager.....PETER P. PINTO
Editor.....J. P. BUSHNELL
Circulation Manager.....M. A. KRAMER

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THE RUBBER AGE is indexed in *Industrial Arts Index*

The Rubber Industry's CURRENT NEWS

Financial—Personals—New Rubber Products—
Building Operations—Manufacturing—Exports

SALES INCREASE WITH DROP IN PRODUCTION

Sharp decline in production of tires and rubber products in August, as compared with July, is noted by Fourth Federal Reserve bank at Cleveland in its September business review.

Employment at 21 concerns was 21 per cent less in August than in the preceding month, the drop being greater than the 5-year average decline of 2 per cent, it was reported. Compared with a year ago, the number employed in August in the industry was down 10 per cent.

The federal reserve bank summary of conditions in the rubber industry continued:

"In the first half of September a slight improvement in orders was reported by some companies, a contrary-to-seasonal movement, but little change in the entire month's sales was expected. Operations in early September were down about the usual seasonal amount from August.

"The increased sales volume in the first part of September was accounted for by the price situation, it being generally felt that the advance in raw cotton and rubber prices would be followed by an increase in prices of finished goods. This occurred on Sept. 12, when major manufacturers and mail order houses announced advances of 11 to 15 per cent.

Footwear Plant Active

Two departments of the Goodyear Rubber Company, Middletown, Conn., manufacturers of the "Gold Seal" brand of rubber footwear, have been operating on both day and night shifts since early in September, and the payrool has shown constant increases, according to Harold S. Guy, president.

On September 29 the plant employed more than 300, with prospects of increasing the number to nearly 600 during the fall, Mr. Guy said, adding that orders on hand indicated a continuance of production for at least eight months more.

The company, first of the Goodyear group to operate under that name, was established in 1853 and incorporated in 1872. It underwent a reorganization in 1929. The plant handles all phases of production on rubber footwear.

Dayton Rubber Busy

Production of the Dayton Rubber Company in the past thirty days has been the highest in the history of the company with 30 per cent more tires and tubes being manufactured than at any time previously at this time of year. The company is doing large replacement business.

Auburn Employes Insured

The entire personnel of the Auburn Rubber Corporation, manufacturer of rubber novelties, of Auburn, Ind., is participating in an employees' group insurance program which includes life insurance and sickness and accident benefits. The Metropolitan Life Insurance Company is underwriting the plan on a cooperative basis, with employer and employees sharing the cost.

Individual amounts of life insurance range from $500 to $2,500, according to salary. In case of sickness or injury incurred off the job, weekly benefits of from $7.50 to $25 will be paid.

Kelly Plan Operative

Stockholders of Kelly-Springfield Tire Company at a recent special meeting approved capital readjustment plan which had been operative since July 28, when two-thirds of each class of stock had been deposited. Under the plan each share of 6 per cent preferred is exchangeable for $100 par value in 10-year 6 per cent notes and two shares of new common stock; each share of 8 per cent preferred is exchangeable for one share of $6 no-par preferred stock, redeemable at $102.50 a share and three shares of new common stock; one share of new $5 par common is to be issued for two shares of old no-par common.

General Increases Advertising

General Tire and Rubber Company have announced that it had increased its advertising appropriation for the remainder of the year 25 per cent.

The statement was made in connection with a survey by a national advertising trade journal. General's reply to the question was:

"In view of improved business and better outlook, we have increased advertising appropriations 25 per cent and have committed ourselves to immediate use of the increase."

Seiberling Men Confer

Salesmen and branch managers of Seiberling Rubber Company had their annual three-day sales conference at Akron recently, which culminated in a banquet at the Mayflower hotel.

F. A. Seiberling, president of the company, opened the conference. The men were also entertained at the Seiberling home on N. Portage Path, Akron.

GERMAN PRINCES SEE ZEPPELINS IN AKRON

Viewing the American outgrowth of the Zeppelin dirigible aircraft industry in America, an industry founded in Germany and promoted particularly by their grandfather the former German Kaiser, Prince Louis and Prince Frederick, of the former ruling house of Germany, paid a brief visit to the Akron airdock of the Goodyear-Zeppelin Corporation, in Akron recently.

The princes, traveling in America to inspect industries, came here from Cleveland with E. E. Liebold, personal secretary to Henry Ford.

Speaking precise English, the sons of Crown Prince Frederick Wilhelm, expressed amazement at the size of the airdock and the ship under construction there.

Dr. Karl Arnstein, vice-president and chief engineer of Goodyear-Zeppelin, who came here from the German Zeppelin plant at Friederichshafen, pointed out the new features of the U. S. S. Macon.

Jenkins Bros. Move

Jenkins Brothers, Inc., manufacturers of valves and mechanical rubber specialties, is moving its mechanical rubber division from Elizabeth, N. J., to the main plant in Bridgeport. This will add approximately 100 to the working force at Bridgeport. The company's business in mechanical rubber specialties is reported to be increasing steadily.

September Rim Output Drops

Tire rims inspected and approved by Tire and Rim Association, Inc., in September totaled 197,999, against 221,913 in August and 504,879 in September, 1931.

For nine months 4,753,133 rims were approved, compared with 10,502,830 in the like period last year.

Glyco Appoints Agents

The Refinery Supply Company, having branches in Dallas, Texas and Tulsa, Okla., have been appointed sales representatives in the mid-continent field by the Glyco Products Company, Inc., of Bush Terminal, Brooklyn, N. Y. The Refinery Supply Co. will specialize on special emulsifying agents and synthetic resins and waxes.

New Carey, O., Plant

Incorporated with 100 shares of no par stock, the Carey Rubber Products Company at Carey, O., is expected to begin operations soon.

HONGKONG MARKET FOR USED AUTOMOBILE TIRES

Of the many varieties of scrap and waste materials for which there is a steady demand in Hongkong and South China, one of the most important is worn-out automobile tires, according to reports of the Canadian Assistant Trade Commissioner in Hongkong. The thrift enforced upon the bulk of the population of South China by the struggle for existence in this thickly populated territory gives a higher value to articles such as old automobile tires than at first sight would seem possible. The greater part of the population of South China do not wear shoes at all, or can afford only the very cheap locally-made grass or straw sandal, which resembles a small straw mat the size of the sole of the foot and is fastened by a piece of string around the ankle. This type of footwear is the most common in South China, but its wearing qualities leave much to be desired. Ingenious and thrifty Chinese have observed that a sandal of the same shape, just as comfortable and with superior wearing and lasting qualities, can be cut out of used automobile tires. A regular trade has developed here in this commodity, and it is a common sight to see coolies and peasants wearing bits of old used tires on their feet as sandals. Moreover, the excellent wearing quality of this material has resulted in its adoption as soles for the conventional slipper worn by Chinese who can afford this type of footwear.

This trade originated with the shipment to Hongkong of old automobile tires accumulated at Singapore and Manila, but enterprising exporters in San Francisco, Cal., have recently entered the field, with the result that the United States is now enjoying more than 75 per cent of this trade. Even if allowance is made for the three months of 1930 for which statistics are not available, importations of old tires into Hongkong during the calendar year 1931 are more than double those for the previous year, and the advance figures for the first six months of 1932 reveal that up to June 30 of this year 33,750 piculs, or 1,273 piculs more than last year's total, have been imported (1 picul equals 133⅓ pounds). Obviously this trade is increasing rapidly, and offers an interesting outlet for any accumulation of old automobile tires unsaleable in Canada.

In the case of used tire casings, the tread surface of which is generally worn very thin, the practice in cutting out sandals or soles for slippers is to use the walls or sides of the casings, which are usually sound except for a few cracks or creases. The remnants of an old tire casing, after all the sandals or soles possible have been cut out, are utilized in many ways. They are probably used most extensively in the many small factories in Hongkong and South China, particularly at Canton, manufacturing cheap and low-quality rubber-soled canvas shoes.

Other and less important uses for old tire remnants are numerous, and are illustrative of Chinese ingenuity and thrift. Old rubber tires are used for such purposes as repairing paddy field irrigating apparatus, patching leaky roofs or water receptacles, packing or wrapping for defective pipe or hose connections, and as fenders slung along the sides of Chinese cargo and fishing junks.

Old inner tubes are used largely on the wooden sandals worn by the Chinese during damp and rainy weather. This type of footwear consists of one piece of wood cut in the shape of a sole and heel combined, and held on the foot by a small strip of old inner tube nailed to either side of the wooden sole about two inches back from the toe-end, thus providing a pliable and comfortable rubber fastening strap across the instep.

Old inner tubes are also reclaimed by local rubber-shoe factories, but the business in tubes is not nearly as extensive as that in worn-out casings, probably due to the fact that the former are not available for export in large quantities.

Rubber Industry Exhibit

An exhibit depicting the history of the rubber industry and featuring the modern rubber products now used in aviation, has been designed by the B. F. Goodrich Company and will shortly be placed in the Newark, N. J., Museum.

New Connecticut Plant

A new corporation is being formed in Danielson, Conn., to engage in the manufacture of a puncture-proof inner tube for automobile tires and other rubber goods. The corporation's name has not yet been announced, nor the names of those backing it. A mill at Elmville, near Danielson, has been purchased for use of the new concern, which, it is understood, will be in operation by the first of the year, employing 40 to 50 hands. Walter Anderson of Danielson is one of those interested in the project.

Industrial Workers' Gardens

Workers of the B. F. Goodrich Company's industrial cooperative garden near Old Portage, Akron, O., last week, ending September 10, took home to their families more than twenty-two tons of garden produce—44,267 pounds to be exact.

According to the report of B. E. Seaver, supervisor of the garden, to A. C. Sprague, Goodrich employment manager, the men who have been cultivating the 275 acres took home the following produce for the week ending September 10:

Green beans	2,783	pounds
Cabbage	4,251	pounds
Sweet corn	25,380	ears
Onions	349	pounds
Medium peppers	1,296	pieces
Hot peppers	5,592	pieces
Cayenne peppers	8,856	pieces
Potatoes	4,767	pounds
Squash	1,420	pounds
Tomatoes	3,476	pounds
Turnips	1,076	pounds

There is still opportunity for part-time and former employees of Goodrich to participate in work at the cooperative gardens and share in distribution of products, Sprague said.

Work at the gardens, believed largest industrial cooperative project in the country, will continue several weeks longer.

TEST RUNS OF FIRE ENGINES ON FLAT TIRES

How a fire engine was run as a test for 16 miles on a flat tire was described at the National Fire Brigade Association's annual conference at Llandudno, Wales, recently by W. Bird Stokes, of the Dunlop Rubber Company, in the course of a paper on "Pneumatic Tires for Fire Engines." Fire brigade officers sometimes expressed concern, Mr. Stokes said, about the possibility of delay occurring should a puncture take place. In such a case the driver might either change the wheel, which would occupy only some seconds by an efficient crew, or he might proceed on the deflated tire.

"Tests already carried out by an important firm of fire engine manufacturers show," Mr. Stokes continued, "that with a front tire deflated, there is no danger, and the pump can be driven comfortably at 15 to 18 m. p. h., although cornering may require a little more steering effort. A vehicle was run in this condition for 16 miles and the tire did not leave the rim."

Henry Hallock

Death of Henry Hallock, 68, president of the Ohio Rubber Company, Cleveland, O., who was asphyxiated by auto exhaust fumes in the garage of his home at Cleveland recently, was pronounced a suicide.

Mr. Hallock was slumped in a chair in the rear of the garage when his body was found. The engine of his 16-cylinder auto had stopped when the gasoline tank was emptied.

Mr. Hallock had lived in Cleveland 38 years and had operated the Ohio Rubber Company for many years. He was born in Maine and was a graduate of Amherst College.

He acquired the Buckeye Rubber Company plant in Willoughby, six years ago and changed its name to the Ohio Rubber Company. The factory produces rubber auto accessories.

Mr. Hallock was a member of the Shaker Heights Country Club, Union Club, Country Club and the Chamber of Commerce. In addition to his widow, he is survived by a son and daughter.

Morris Mason

Morris E. Mason, 61, for many years an executive of the Mohawk Rubber Company, died Wednesday, Oct. 12, at a Cleveland hospital, following a stroke of apoplexy. He suffered a breakdown eight weeks ago.

Prior to his retirement in 1924 from the Mohawk organization, he served the company as general sales manager and secretary. He started with the company as one of its founders shortly after coming to Akron in 1912. In January of 1927, he was named president of the Star Rubber Company, in which capacity he served for a time.

For 30 years, Mr. Mason was actively identified with the rubber industry. Before coming to Akron, he was associated with the United States Rubber Company. He was a native of Winona, Minn.

William Stephens

One of the best known and best beloved men in the rubber industry, William Stephens, general superintendent of all the Akron plants of the Goodyear Tire and Rubber Company, passed away on October 14.

He was born in Akron, August 23, 1876, and was educated in the public schools of that city. He joined the Goodyear organization in 1901 and worked up to the position of foreman of the tire and tube room in 1910, when the Goodyear plant was still a small concern. Two years later he was division superintendent and by 1915 was production superintendent. In 1920 he was appointed to his last post of general superintendent.

In tribute to his career with his company, Paul W. Litchfield, president of Goodyear, pays him the following tribute:

"He gave everything he had toward building up the company with which he was associated and to the welfare of his shopmates. With a brotherly sympathy for the workingman, he became a natural leader, leading men through the affection they felt for him and their respect for his ability. Striving sincerely always to help those working with him, instructing and training them, giving opportunities for them to develop, he inspired an unusual sense, within Goodyear, of loyalty and efficiency. And these are the marks of successful leadership.

"By hard work and merit he became General Superintendent of all the Akron plants of the company . . . a position he held with credit until his passing away. His successful career in Goodyear, starting at the bottom, rising steadily to the top, is an example to everyone in the factory of what may be accomplished. With his passing every one of us will feel that we have lost a real pal. The part which he has played in our lives during this long period of service will long be remembered."

N. T. D. A. to Meet at Atlanta

The Thirteenth Annual Convention of the National Tire Dealers' Association is scheduled to meet at the Atlanta-Biltmore Hotel, Atlanta, Ga., November 14-16. According to the plans of M. J. Barry, president of the Association, and Norval P. Trimborn, secretary-manager, the Atlanta gathering of tire dealers will try to find some definite solution for the many problems now confronting the dealers.

Names in the News

FRED HARPHAM, vice-president of Goodyear Tire and Rubber Company, is reported to be recovering at the City Hospital, Akron, from a sudden attack of appendicitis, which necessitated an operatoin.

A. L. FREELANDER, vice-president and factory manager of the Dayton Rubber Company, left recently on a business trip to South America. He plans to proceed from Rio de Janeiro to Germany by the *Graf Zeppelin*, on its return flight across the Atlantic late in October. The trip to Germany will be for business purposes also.

W. S. MERRITT, foreman in the Akron plant of Goodyear Tire and Rubber Company, was severely hurt in a recent automobile accident and has been confined to the Peoples Hospital, Akron.

HARRY M. JOHNSON, credit manager of Mason Tire and Rubber Company for the past 12 years, has accepted the position of credit manager and auditor for the Pennsylvania Rubber Company, Jeanette, Pa. Mr. Johnson is an old rubber company man, having been credit manager with the McGraw Tire and Rubber Company, at East Palestine, O., before going with the Mason Company.

KYLE MENUEZ, who spent several years as office manager for the India Tire and Rubber Company, at Inchinnan, Scotland, is sailing for Vienna, Austria, after spending several months at his home in Benton, O. In Vienna he will have charge of the offices of the Independent Tire Distributing Agency, agents for Avon-Seiberling tires in that territory.

W. S. ROSENBERGER, operations manager of Pennsylvania Airway Inc., tested several new navigation instruments designed by engineers of the air line in the B. F. Goodrich Company wind tunnel, Friday, September 30. The new devices, when perfected, will further increase safety in flying, Rosenberger told Goodrich engineers.

W. H. KEPLINGER, in charge of retail credits, becomes district credit manager in Philadelphia; W. A. ALLEN, Philadelphia, will go to New York as branch credit manager, replacing J. M. SAINT, who goes to Syracuse as district credit manager, filling the vacancy created by the recent death of J. H. DEGENHARDT, according to credit department changes announced recently by the B. F. Goodrich Company.

Cleveland credit changes include the transfer of DON EVANS, former Akronite and branch credit manager, to Atlanta as assistant division credit manager, and of FRANK A. DALEY, retail store operating manager, to the Cleveland credit managership.

EDWARD H. FITCH, another Cleveland credit man, will go to Memphis as special credit representative out of the St. Louis branch.

P. J. KELLY, assistant to C. B. O'CONNOR, general tire sales manager of the B. F. Goodrich Company, addressed the annual convention of the Direct Mail Association in New York City, Friday, October 7th. Mr. Kelly's subject was "Players versus Scorekeepers."

W. H. KEPLINGER, B. F. Goodrich Company credit department, recently transferred to Philadelphia, was guest at a farewell dinner given by his friends at the University Club, Wednesday, October 5th. Forty attended and a short talk was given by H. V. GAERTNER, Goodrich's assistant comptroller.

FRANK H. SHELLIN, assistant sales manager of the toy sales division of the Miller Rubber Products Company, Inc., division of the B. F. Goodrich Company, left Sunday, October 9th, on a two months' western trip made necessary by hundreds of inquiries about the new "My Dolly" rubber doll, which the Miller company recently has created.

OLIVER P. GREENWOOD has resigned as general manager and assistant treasurer of the New York Insulated Wire Company, Wallingford, Conn., and management of the factory has been turned over to D. F. DAVIS, formerly of the Davis-Jones Company, insulated wire, Providence, R. I., and RALPH H. MOUNT, formerly connected with the Anaconda Wire and Cable Company in its Pawtucket, R. I., and Marion, O., factories.

Mr. Davis will act as general manager, having charge of all sales activities, while Mr. Davis is factory superintendent. Both took over their duties early in October and Mr. Greenwood left on October 15. The plant has resumed production after having been virtually shut down since last spring, with only a handful of men employed.

WALTER G. ERDMAN has been recently appointed by The General Tire and Rubber Company, as branch manager for Detroit in charge also of retail activities. Mr. Erdman has had more than a dozen years' experience in the Detroit field, nine of which have been with the General company. His work during that period has covered every phase of the tire merchandising and service branches and has been supplemented by factory contracts.

Heads Canadian Firestone

Appointment of William H. Funston, Jr., of Akron, O., as president of the Firestone Tire and Rubber Company, Ltd., of Canada, has been recently announced. He will succeed Earl W. BeSaw, who died suddenly last month.

Mr. Funston joined the Firestone organization over seven years ago as purchasing agent for the Firestone Steel Products Company. Mr. Funston has already taken up his new duties at Hamilton, Ont.

Rubber News Around the World

FOREIGN TRENDS IN RUBBER CONSUMPTION

Among the important rubber manufacturing countries of the world, the United Kingdom, Japan and Russia, ranking second, third and sixth in rubber absorption at present, are this year making new high records in crude rubber takings, according to the latest reports of the Department of Commerce. Czechoslovakia, Norway and Sweden, and Spain are the less important countries importing more rubber than in any previous year during the first seven or eight months. In addition, Australia is making a better record than for any year except 1929, and Germany and Italy are importing more than in the same period of 1931.

The important countries for which 1932 consumption is at a new low record for the depression are the United States, Canada, France, and Belgium. Loss of export trade, transfer of business to foreign branch factories under force of economic pressure, and reduced domestic automobile production and registrations, are the chief causes of the decline in North America, and doubtless likewise in France and Belgium. Foreign countries as a whole will require more rubber in 1932 than the United States, if their rate of absorption continues through the year. In prewar years this was regularly the case until 1913; since 1913 the United States has always used more rubber annually than all other countries combined.

Harrison & Crosfield

The net profit of Harrisons and Crosfield for the year ended June 30 last was £182,032, against £236,845 for the previous year. Adding £100,329 brought in, there is £282,361 available.

A final dividend of 2½ per cent is recommended on the deferred ordinary, making 5 per cent for the year, against 12½ per cent, the carry-forward being £108,978.

The directors have decided to transfer from general reserve to special reserve against investments a further £150,000, bringing it up to £350,000, which they consider amply covers all depreciation. They do not regard the depreciation as permanent. A comparative table shows:

To June 30	1932	1931
Net profit	£182,032	£236,845
Brought in	100,329	106,587
Available	282,361	343,432
Pref. dividend	37,800	37,800
Prefd. dividend	100,000	100,000
Management shares div.	1,250	12,060
Defd. div. amount	19,333	47,804
Defd. div. rate per cent	5	12½
Directors' remuneration	15,000	5,439
Off investments	.....	.....
To reserve	.....	40,000
Forward	108,978	100,329

British Rubber Absorption

British rubber trade circles are hopeful concerning the local absorption of crude rubber in 1932. The first six months' figure was approximately 38,000 long tons, and the last half-year is believed to be well on the way to equalling that figure, or 76,000 tons for the year. Absorption in 1931 was placed at 76,583 tons.

The present year's estimate is based on the consideration that domestic British sentiment is improving, and that the War Loan conversion bonus may give a temporary stimulus to car purchases.

Want an Agent in Bulgaria?

American rubber goods manufacturers seeking a sales connection in Bulgaria might communicate with Marco B. Garti, Ul. Torgowska, 3-Schliessfach 318, Sofia, Bulgaria, who writes that he will be interested in handling various types of American rubber products in that country and is one of the largest local rubber importers.

ESTATE PRODUCTION IN JAVA AND SUMATRA

Statistics issued by the Rubber Growers Association covering sixty estates in Java, show those companies producing at a rate of 26,800 tons in June and July against a rate of 34,000 tons in February-March, after adjustment for seasonal. Those estates produced 34,492 tons in 1931.

For 60 estates in Sumatra, production in July fell behind July, 1931, the first 1932 month in which this has occurred. The June figure of 4,303 tons compares with 4,222 in 1931, while the July total of 4,199 tons compares with 4,476 in 1931.

Probably the clearance of estate stocks of rubber on areas going out of tapping prevents the reduced output being immediately reflected in export statistics, but the decline in estate outputs in Java reported by R. G. A. have been noteworthy in the past four months, amounting to over 22 per cent after adjustment for seasonal.

September Rubber Movement

A smaller tonnage of crude rubber was shipped to the United Kingdom during September, but larger quantities to the United States and all other consuming countries, according to details of Malayan exports for that month, received by the Rubber Exchange of New York.

The figures follow:

	Sept. 1932	*Aug.* 1932	*Sept.* 1931
United States	22,387	21,362	29,476
United Kingdom	5,925	6,455	5,204
British Possessions	773	636	602
Continent	6,662	6,094	4,334
Japan	5,310	4,096	3,791
Other countries	407	160	774
Latex & Revertex	509	534	155
Totals	41,973	39,337	44,336

Of the total Malayan exports in September, 8,869 tons were "imports" from other producing territories sent there for transshipment, chiefly from Dutch East Indies native sections. Such imports totaled 7,371 tons during August, and 8,369 tons during September, 1931.

ATTRACTIVE RUBBER EXHIBITS AT BRITISH FAIR

Although rubber in some form or another has long been used in numerous branches of constructional work, as the result of recent technical advances the directions in which it can be used have been widened. As a result the Rubber Growers' Association in its exhibit at the International Building Trades Exposition, just held in London, concentrated on some of the more important of rubber's newer applications. At its stand were featured the latest types of rubber flooring in finishes which are claimed to reduce foot marks to the minimum. A part of the stand was given up to the use of rubber as a pipe jointing medium and the R. G. A. claims that its proved advantages for this purpose under very onerous conditions will in the course of time lead to its greatly extended use on account of the simplicity of application and leak tightness. Special displays were also made of rubber paints and roofing compositions.

A joint exhibit was staged by 19 members of the Cable Makers' Association. It was generally representative of the various types of cable used in electrical installations and included rubber insulated cables with various metallic and non-metallic protective coverings in single-core, concentric, and multicore types, armored and unarmored cables for street mains, factories and power transmission, and special systems of wiring for houses.

Rubber Courses in England

Provisional arrangements have been completed for the establishment of day classes in connection with the Department of Rubber Technology at Aston Technical College, Birmingham, England.

In the Aston scheme for the rubber industry the subjects which it is proposed to include in the syllabus are English, mathematics, engineering science, properties of rubber materials and rubber technology. The ordinary classes in the Department of Rubber Technology are now commencing their third year.

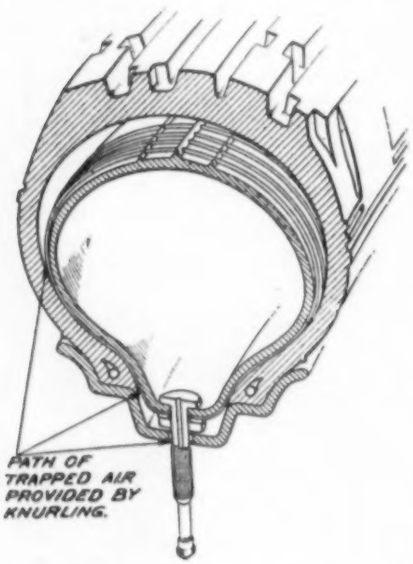
In engineering science it is intended to include those aspects of the subject which have special bearing on the rubber industry. The foundations of the study of such physical phenomena as transfer of heat, radiation, evaporation, properties of solids and liquids, combustion, force and its applications, and friction, will be laid, and will lead to a further study of the properties of rubber materials.

In the work in rubber technology it is proposed that during the first year of the course such subjects as the early work in latex and rubber-yielding plants shall lead to a knowledge of the modern methods of production of crepe and smoked sheet. Methods of handling rubber in the factory will be dealt with, and such processes as are the normal procedure in a rubber factory will be systematically studied.

New U. S. "Vented" Tube

"TRAPPED AIR," a common cause of tire failure which has been greatly aggravated by drop center rims, is said to be eliminated by a new type of tube, known as a "vented" tube, introduced recently by the United States Rubber Company.

The "trapped air" problem has always existed to an unknown extent, but it was not recognized as a definite cause of tire failure until the drop center rim became popular.



This type of rim, being of one piece construction and having no splits or loose side flanges, is likely to form a continuous airtight seal offering no outlet for the air except through the valve hole. Consequently great quantities of air are frequently trapped between the casing and tube in mounting.

Tire manufacturers found that the trapped air, seeking an outlet under pressure of the inner tube, often worked through the tire carcass and produced blisters on the outside of the tire, or separation under the sidewall or tread. Their remedy, therefore, was to make a very small hole in the sidewall through which the air might escape.

The United States Rubber Company has found a new solution of the problem, it believes, in the development of the "vented" tube. This tube is knurled or corrugated to form vents so that the trapped air at any point of the casing is automatically led out through the valve hole during the first few revolutions of the wheel. Patent is pending on this tube.

Louis Henry Perlman

Louis Henry Perlman, inventor of the demountable rim for automobile wheels and central figure in one of the most bitter patent litigations in the early history of the automobile industry, died of arterio-sclerosis, Oct. 10, at the Flushing Hospital, Long Island, N. Y., after an illness of three years. He was seventy years old.

The first idea of an inflated tire to be mounted on its rim and carried on the automobile came to Mr. Perlman in 1900, after he and a friend had been forced to change four tires and inflate each with a hand pump. After three years' experimentation in a machine shop with hundreds of combinations of the wedge and screw he filed an application for a patent at the United States Patent Office on May 21, 1906.

The application passed from official to official until finally, in 1913, Mr. Perlman received his patent. During the delay, however, similar devices had been adopted, and most automobile firms already were using a form of the demountable rim.

In 1916 Mr. Perlman brought a patent infringement suit against the Standard Welding Company, of Cleveland, then the largest manufacturer of rims in the country, on the ground that his patent antedated those of the company. The case was heard in the United States District Court for the Southern District of New York and became famous in the annals of patent history. When lawyers of the defense scoffed at Mr. Perlman's contention that he had constructed his rim with the tools he produced in court, the court was adjourned to a near-by basement, where Perlman, before Judge Hunt, counsel and spectators, produced the demountable rim with his thirteen-year-old tools.

The court decided in his favor and after another battle in the United States Circuit Court of Appeals, Mr. Perlman's claims to a patent covering virtually every form of demountable rim were recognized on February 15, 1916. Declining offers of $750,000 a year for the use of his patent and a cash bonus of more than a million dollars, Mr. Perlman associated himself with W. C. Durant, then president of the Chevrolet Motor Car Company, and Louis G. Kaufman, then president of the Chatham Phenix National Bank, and formed the Perlman Rim Corporation.

The corporation established factories at Utica, N. Y., and Jackson, Mich., which in a few months were producing the rims at the rate of 1,000,000 sets a year. New York offices were at 1790 Broadway. Mr. Perlman served as president for three years, until the corporation was absorbed by General Motors, after which he retired from active business.

Mr. Perlman was born in Kovno, Russia, in 1862, and was brought to this country by his parents when he was three years old.

Little Joins Servus

The Servus Rubber Company of Rock Island, Ill., has announced the appointment of Mr. C. E. Little as Executive Vice-President. Mr. Little comes to the Servus Company from the Converse Rubber Company where he has been Vice-President in charge of sales. Prior to that, Mr. Little was for a number of years President of the Beacon Falls Rubber Shoe Company, and in an executive sales capacity with the United States Rubber Company.

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LATE MARKET PRICES

RUBBER—COTTONS AND FABRICS—CHEMICALS

NEW YORK, OCTOBER 18, 1932

Crude Rubber

PRICES receded fractionally over the whole line of crude rubber grades during the last two weeks, due primarily to lack of buying demand and another advance in stocks on hand. The September consumption figure was particularly disappointing in view of early predictions, the total tonnage absorbed domestically scarcely exceeding the low August figure of around 22,500 tons. It is evident, in view of the present statistical position of crude rubber, that any opinion toward an appreciable advance in prices, must be accepted as a long term view.

Prices as of October 18, as reported on the New York outside market, were as follows:

Plantations—

Ribbed Smoked Sheets—			
Spot-Oct.	—	@	.03⅜
Nov.-Dec.	—	@	.03⅜
Jan.-Mar.	—	@	.03⅜
First Latex, crepe spot	—	@	.03⅜
Amber Crepe, No. 2	—	@	.03 5/16
Amber Crepe, No. 3	—	@	.03⅛
Amber Crepe, No. 4	—	@	.03
Brown Crepe, Clean thin	—	@	.03 1/16
Brwon Crepe, rolled	—	@	.02 13/16

Latex—

Liquid Latex, per gal.	.70	@	.75

Paras—

Up-river, fine	.07	@	.07½
Up-river, coarse	Nominal		
Acre, Bolivian, fine	.07½	@	.08
Caucho Ball, Upper	—	@	.03

Centrals—

Central scrap	.04	@	—
Esmeraldas	.04	@	—

Balata—

Block, Ciudad	—	@	.18

LONDON MARKET

Standard Ribbed Smoked Sheets—Buyers

Oct.	—	@	2 11/32d
Nov.-Dec.	—	@	2 15/32d

SINGAPORE MARKET

Standard Ribbed Smoked Sheets—Sellers

Spot	——	@	2d

Reclaimed Rubber

Prices for standard grades of reclaimed rubber have not changed during the fortnight. Demand remains limited in line with the low consumption of crude rubber, but the proportion of reclaimed used to crude in batch compounds continues at a favorable percentage, and actually increased slightly during the month of August. Late prices follow:

High Tensile

High Tensile Red	lb.	.04¾	@	.05
Super-Reclaim Black	lb.	.05	@	.05⅛

Shoe

Washed	lb.	.05½	@	.05¾

Tube

No. 1 (Floating)	lb.	—	@	.06½
No. 2 (Compounded)	lb.	.04½	@	.04¾

Tires

Black	lb.	.03¾	@	.04
Black, selected tires	lb.	.04	@	.04¼
Dark Gray		.05	@	.05¼
Light Gray	lb.	.05½	@	.06
White	lb.	.05½	@	.05¾
Truck, Heavy Gravity	lb.	.05	@	.05¼
Truck, Light Gravity	lb.	.05¼	@	.05½

Miscellaneous

Mechanical blends	lb.	.03	@	.03½

Scrap Rubber

No changes have been reported in scrap grades of rubber during the last two weeks and no reductions can hardly be expected in view of the extremely low levels now prevailing. Accumulations continue difficult under the circumstances and demands from reclaimers have shown no improvement. Late prices for standard grades follow:

(Prices to Consumer)

Auto tire peelings	ton	15.00	@	17.00
Mixed auto	ton	6.50	@	7.50
Clean solid truck tires	ton	22.50	@	25.00
Boots and shoes	ton	15.00	@	17.50
Arctics, untrimmed	ton	10.00	@	12.50
Inner tubes, No. 1	lb.	.02¼	@	.02½
Inner tubes, No. 2, compounded	lb.	.01⅛	@	.01¼
Inner Tubes, Red	lb.	.01½	@	.01¾
Air Brake Hose	ton	8.00	@	8.50
Rubber Hose	ton	6.00	@	8.00

Cotton

THE market for cotton has shown some weakness during the past fortnight but has recently climbed back to slightly higher levels than two weeks ago. The general commodity situation has not shown any improvement although export demand is holding up and mills continue to report further productive activity. Stocks continue high, however, and out of proportion to conservative estimates of mill requirements for many months.

High, low and closing prices on the New York Cotton Exchange as of October 18, were as follows:

	Oct. 18			Oct. 3
	High	Low	Close	Close
Oct.	6.28	6.15	6.18	6.98
Dec.	6.36	6.18	6.26	7.02
Jan.	6.40	6.24	6.33	7.09

Tire Fabrics

Prices dropped slightly over the fortnight in the face of a limited demand and lower raw cotton levels. Mills reported nothing but hand-to-mouth buying with stocks steadily mounting. On the other hand there is considerable mill activity and a further demand is expected with any slight advance in tire production schedules. Late quotations follow:

(Prices Net at the Mill)

CORD

Peeler, carded, 23/4/3	lb.	.22	@	.22½
Peeler, carded, 23/5/3	lb.	.21	@	.21¼
Peeler, carded, 13/3/3	lb.	.18	@	.18¼
Peeler, carded, 15/3/3	lb.	.19	@	.19¼
Egyptian, carded, 23/5/3	lb.	.34½	@	.35
Egyptian, combed, 23/5/3	lb.	.39½	@	.40

CHAFERS

Carded, American, 8 oz.	lb.	.18	@	.18½
Carded, American, 10 oz.	lb.	.18	@	.18½
Carded, American, 12 oz.	lb.	.18	@	.18½
Carded, American, 14 oz.	lb.	.17⅛	@	.18

LENO BREAKER

Carded, American, 8¼ oz.	lb.	.18	@	.21
Carded, American, 10¼ oz.	lb.	.18	@	.21

SQUARE WOVEN

Carded, American, 17¼ oz. 23-11 ply	lb.	.21	@	.21¼
Carded, American, 17¼ oz. 10-5 ply	lb.	.17	@	.17½

Sheetings

There was a fractional reduction reported in sheeting constructions used in the rubber industry, during the last fortnight, but demand was light and the drop in price levels merely reflected the decline in raw cotton prices and the desire to move surplus stocks at mills. Late prices were as follows:

40 inch, 2.50 yard	yd.	—	@	.06¼
40 inch, 2.85 yard	yd.	—	@	.05½
40 inch, 3.15 yard	yd.	—	@	.05⅝
40 inch, 3.60 yard	yd.	—	@	.05
40 inch, 3.75 yard	yd.	—	@	.04¼
40 inch, 4.25 yard	yd.	—	@	.04

Ducks

Enameling	lb.	.20	@	.22
Belting and Hose	lb.	.22	@	.23
Single filling	lb.	.08	@	.08½
Double filling	lb.	—	@	.10

Closing Prices on Rubber Exchange of New York, Inc.

No 1 Standard Contract of 10 Tons*

FROM OCTOBER 4 TO OCTOBER 19, 1932

Date	Spot	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Sales
Oct. 4	3.60	3.50	3.57	3.65	3.72	3.78	3.85	3.88	62
5	3.45	3.40	3.45	3.50	3.56	3.62	3.68	3.73	188
6	3.45	3.40	3.44	3.49	3.56	3.64	3.72	3.76	29
7	3.37	3.33	3.37	3.42	3.50	3.58	3.66	3.69	98
8	3.40	3.28	3.32	3.36	3.44	3 52	3.60	3.64	72
10	3.37	3.25	3.29	3.34	3.42	3.50	3.58	3.60	79
11	3.41	3.28	3.32	3.37	3.45	3.53	3.61	3.64	21
13	3.36	3.23	3.27	3.32	3.40	3.47	3.54	3.56	69
14	3.42	3.29	3.33	3.38	3.46	3 54	3.62	3.63	42
15	3.40	3.27	3.31	3.36	3.43	3.50	3.57	3.61	28
17	3.34	3.20	3.25	3.30	3.36	3.42	3.48	3.52	45
18	3.34	3.20	3.25	3.30	3.37	3.43	3.49	3.53	18

This contract will be superseded by "No. 1 B Standard" on April 1, 1933.

CHEMICALS

CONTINUED low production schedules of the larger rubber plants have resulted in a continuance of the hand-to-mouth buying of chemicals and compounding materials which has prevailed for some months. The smaller rubber factories have been proportionately operating on a better scale but the volume of chemicals used in such plants is relatively small. There have been reductions in prices on several materials with current quotations as follows:

ACCELERATORS

Organic				
A-1	lb.	.24	@	.27
A-5-10	lb.	.33	@	.36
A-7	lb.	.55	@	.59
A-11	lb.	.62	@	.66
A-16	lb.	.57	@	.61
A-19	lb.	.58	@	.62
A-20	lb.	.64	@	.68
A-32	lb.	.80	@	.95
Aldehyde ammonia, crystals	lb.	.65	@	.67
Altax	lb.			
Captax	lb			
Crylene	lb.	.55	@	.65
paste	lb.	.45	@	.55
Di-Ortho-Tolyguanidine	lb.	.42	@	.43
Diphenylguanidine	lb.	.33	@	.34
Ethylidene aniline	lb.	.45	@	.47½
Formaldehyde aniline	lb.	.37½	@	.42
Heptene	lb.	.40	@	—
Hexamethylene-tetramine	lb.	.46	@	.47
Lithex	lb.	.18	@	.20
Methylenedianiline	lb.	.37½	@	.40
Monex	lb.	3.25	@	—
Oxynone	lb.	.68	@	.80
Phenex	lb.	.50	@	.55
R & H 40	lb.	.40	@	.41
R & H 50	lb.	.40	@	.41
R & H 397	lb.	.75	@	.76
R-2	lb.	1.95	@	2.15
Safex	lb.	1.20	@	1.25
SPDX	lb.	.75	@	—
Super-Sulphur No. 1	lb.			
No. 2	lb.			
Tensilac, No. 39	lb.	.40	@	.42½
Tensilac, No. 41	lb.	.50	@	.52½
Thermic F	lb.	.50	@	.55
Thiocarbanilid, drums	lb.	.25	@	.27
TMTT	lb.	3.00	@	3.25
Trimene	lb.	.75	@	—
base	lb.	1.20	@	—
Triphenylguanidine	lb.	.58	@	.60
Tuads	lb.			
Ureka	lb.	.75	@	1.00
Vulcanex	lb.			
Vulcone	lb.			
Vulcanol	lb.			
Z-88-P	lb.	.50	@	.60
Zimate	lb.			
Inorganic				
Litharge, domestic	lb.	.05¾	@	—
Magnesia, calcined,				
light per 100	lb.	5.35	@	5.45
heavy per 100	lb.	3.65	@	3.75

COLORS

Blacks (See Compounding Materials)

Blues				
Prussian	lb.	.36	@	.37
Ultramarine	lb.	.06	@	.30
Browns				
Sienna, Italian	lb.	.04	@	.08
Umber, Turkey	lb.	.04	@	.06
Greens				
Chrome, light	lb.	.23	@	.26
medium	lb.	.26	@	.28
dark	lb.	.28	@	.33
Chromium Oxide, bbl.	lb.	.23	@	.27
Reds				
Antimony				
crimson, 15/7	lb.	.40	@	—
sulfur, free	lb.	.52	@	.56
Indian English	lb.	.09	@	.10
Domestic (Maroon)	lb.	.11	@	—
Red oxide, pure	lb.	.10	@	.12
Rub-Er-Red, f.o.b. Easton	lb.	.08¾	@	—
Whites				
Lithopone, Albalith	lb.	.04½	@	.04¾
Lithopone, Azolith	lb.	.04½	@	.04¾
Titanium oxide	lb.	.17	@	.19
Titanox B	lb.	.06	@	.06½
Titanox C	lb.	.06	@	.06½
Zinc Oxide—American Process				
American Azo:				
ZZZ (lead free)	lb.	.05¾	@	.06
ZZ (leaded)	lb.	.05½	@	.05¾
Horsehead Lead Free Brand:				
Selected	lb.	.05¾	@	.06
Special	lb.	.05¾	@	.06
XX Red	lb.	.05¾	@	.06
XX	lb.	.05¾	@	.06
XX Green	lb.	.05¾	@	.06
Leaded Brand, Standard	lb.	.05½	@	.05¾
Sterling	lb.	.05½	@	.05¾
Superior	lb.	.05½	@	.05¾
Lehigh	lb.	.05¼	@	.05½
U. S. P., bbls.	lb.	—	@	.12¾
Kadox, black label	lb.	.09⅝	@	.09⅞
Blue label	lb.	.08⅝	@	.08⅞
Red label	lb.	.07¼	@	.07½
Cryptone, No. 19	lb.	.06½	@	.06¾
Cryptone CB, No. 21	lb.	.06½	@	.06¾
XX Zinc Sulphide, bbls.	lb.	—	@	.13
St. Joe, black label	lb.	.05¾	@	.06
green label	lb.	.05¾	@	.06
red label	lb.	.05¾	@	.06
Zinc Oxide—French Process				
Anaconda, lead free	lb.	.05¾	@	.06
Anaconda, selected lead free	lb.	.06¼	@	.06½
Florence White seal, bbls.	lb.	—	@	.10⅞
Green seal	lb.	.09⅝	@	.09⅞
Red seal	lb.	.08⅝	@	.08⅞
Yellows				
Chrome	lb.	.16	@	.16½
Ocher, dom. med.	lb.	.01½	@	.02

BLACKS

Arrow "Aerfloted"				
c.l. f.o.b. works, bags	lb.	.02¾	@	—
c.l. f.o.b. works, cases	lb.	.04¼	@	—
less c.l. f.o.b. works	lb.	.05¼	@	.07
Arrow "Aerfloted" Specification, c.l. f.o.b. wks., bags	lb.	.03	@	—
Bone, powdered	lb.	.05½	@	.12½
Carbon, compressed	lb.	.02¾	@	.07
uncompressed	lb.	.02¾	@	.07
"Certified," Cabot				
c.l. f.o.b. works, bags	lb.	.02¾	@	—
c.l. f.o.b. works, cases	lb.	.04¼	@	—
less c.l. f.o.b. works	lb.	.05¼	@	.07
"Disperso" f.o.b. La.	lb.	.028	@	.071
f.o.b. Texas	lb.	.02¾	@	.07
Drop, bbls.	lb.	.05½	@	.14
"Excello," compressed	lb.	.03	@	—
"Fumonex"	lb.	.02½	@	.06
"Gastex"	lb.	.02½	@	.06
Lampblack	lb.	.06	@	.08
"Micronex"				
c.l. f.o.b. works, bags	lb.	.03	@	—
c.l. f.o.b. works, cases	lb.	.04½	@	—
less c.l. f.o.b. works	lb.	.05½	@	.07
"Supreme"	lb.	.02¾	@	—
Thermatomic—"P 33"	lb.	—		—
"Thermax"	lb.	—		—
United, "Dixie" and "Kosmos"				
c.l. f.o.b. works, bags	lb.	.02¾	@	—
c.l. f.o.b. works, cases	lb.	.04¼	@	—
less c.l. f.o.b. works	lb.	.05¼	@	.07
"Velvetex"	lb.	.02	@	.05

COMPOUNDING MATERIALS

Aluminum Flake	ton	21.85	@	24.50
Ammonia carbonate, lump	lb.	.10½	@	.12
Asbestine	ton	13.40	@	14.00
Barium carbonate (98-100%)	lb.	.05	@	—
Barium Dust	lb.	.05	@	.06
Barytes southern off-color	ton	12.00	@	18.00
Western prime white	ton	35.00	@	—
Basofor	lb.	.04½	@	—
Rentonite	lb.	.02	@	.03
Blanc fixe dry f.o.b. works	ton	60.00	@	75.00
Carrara filler	lb.	.01¾	@	.02
Catalpo (fact.)	lb.	.02	@	—
Chalk, precipitated				
Suprex white, extra lt.	ton	60.00	@	70.00
heavy	ton	45.00	@	55.00
Clay, Kaolin, domestic	ton	6.00	@	7.00
Aerfloted, Suprex	ton	6.50	@	8.00
Congaree	ton	9.00	@	—
Dark Blue Ridge	ton			
Dixie	ton			
Langford	ton			
Lexington	ton	10.00	@	22.00
Par	ton			
Tensulite		15.00	@	—
Cotton Flock	lb.	.08	@	.16
Glues, extra white	lb.	.15	@	.22
medium white	lb.	.12	@	.14
Kalite No. 1	ton	30.00	@	55.00
Kalite No. 3	ton	40.00	@	65.00
Magnesia, carbonate	lb.	.05¾	@	.06
Mica	lb.	.04	@	—
Rottonstone (powdered)	ton	23.50	@	28.00
Soapstone, powdered	ton	16.00	@	18.00
Starch, powdered	cwt.	2.34	@	—
Talc, domestic	ton	12.00	@	15.00
Pyrax A	ton			
Whiting, commercial	cwt.	.85	@	1.10
English cliffstone	cwt.	1.50	@	1.70
Sussex	ton			
Witco	ton	20.00	@	—
Zinc Carbonate	lb.	.10½	@	—
Zinc Stearate	lb.	.20½	@	—

MINERAL RUBBER

Genasco (factory	ton	40.00	@	42.00
Granulated M. R.	ton			
Hard Hydrocarbon	ton			
Parmr, solid	ton	23.00	@	28.00
Pioneer. MR, solid	ton	40.00	@	42.00
Pioneer-granulated	ton	50.00	@	52.00
R & H Hydro-Carbon	ton	27.05	@	29.00

SOFTENERS

Acids				
Nitric, 36 degrees	cwt.	5.00	@	5.25
Sulfuric, 66 degrees	cwt.	1.60	@	1.95
Tartaric, crystals	lb.	—	@	.26½
Acids, Fatty				
Laurex	lb.	.15	@	.16
Stearex	lb.	.08	@	.12
Stearic, double pressed	lb.	.08	@	.12
Alkalies				
Caustic soda, 76%	cwt.	2.50	@	2.90
Soda Ash, 58% C.L.	cwt.	1.15	@	1.17½
Oils				
Corn, refined, bbls.	lb.	.05½	@	.06
Cottonseed, crude		.03½	@	.04
Degras (c.l. 100 bbls.)	lb.	.02¾	@	—
Less c.l. (10-25 bbls.)	lb.	.03	@	—
Lots less than 10 bbls.	lb.	.03¼	@	—
Fluxrite	lb.	.05½	@	.0·
Palm Lagos	lb.	.03¼	@	.03½
Niger	lb.	.02¾	@	.03
Para-Flux	gal.	.17	@	—
Petrolatum, white	lb.	.08	@	.08½
Pigmentaroil	gal.	.18	@	.22
Pine, steam distilled	gal.	.59	@	.61
destructively distilled	gal.	.58	@	.62
Witco Palm Oil	lb.	.07½	@	—
Witco Softener (f.o.b. wks.)	lb.	.02	@	—
Resins and Pitches				
Pitch, Burgundy	lb.	.05	@	.06
coal tar	gal.	.05½	@	.06
pine, 200 lb. gr. wt. bbl.		7.00	@	—
Rosin, grade K, 280 lb. bbl.		4.35	@	—
Pigmentar	gal.	.18	@	.22
Tar Retort, 50 gal.	bbl.	10.00	@	11.00
Solvents				
Acetone, pure	lb.	.10	@	.13
Alcohol, denatured,				
No. 1 bbls.	gal.	.37	@	.45
Benzol, 90%	gal.	.20	@	.21
Carbon, bisulfide	lb.	.05½	@	.06¼
Carbon, tetrachloride	lb.	.06¼	@	.07
Dryolene (f.o.b. Okla.)	gal.	.10	@	.10½
Gasoline, steel bbls.	gal.	.16	@	—
Naphtha, solvent	gal.	.26	@	.28
Rub-Sol (f.o.b. Okla.)	gal.	.09	@	—
Turpentine, spirits	gal.	.45¼	@	—
wood	gal.	—	@	.40
destructively distilled	gal.	.35	@	—
Waxes				
Beeswax, white	lb.	.30	@	.32
Carnauba	lb.	.25	@	.26
Ceresin, white	lb.	.10	@	.11
Montan, crude	lb.	.05	@	.06
Ozokerite, black	lb.	.24	@	.25
green	lb.	.26	@	.30
Paraffin (c.l.—f.o.b. N. Y.)				
Yellow crude scale	lb.	.02	@	—
White crude scale 124/126	lb.	.02	@	—
Refined, 125/127	lb.	.02¾	@	—
Refined, 128/130	lb.	.03¼	@	—
Refined, 135/137	lb.	.04	@	—
Refined, 138/140	lb.	.06¾	@	—

ANTI-OXIDANTS

AgeRite, Gel	lb.			
Powder	lb.			
Resin	lb.			
White	lb.			
Albasan	lb.	.70	@	.75
Antox	lb.			
B-L-E	lb.	.57	@	.60
Neozone	lb.			
Oxynone	lb.	.68	@	.80
Resistox	lb.	.54	@	.57
Retardex	lb.	.35	@	.40
Stabilite	lb.	.57	@	.62
Stabilite Alba	lb.	.70	@	.75
VGB	lb.	.55	@	.60

SPECIALTIES

Aromatics- Rodo	lb.			
Sunproof	lb.	.35	@	.37½
Sponge Paste	lb.	—	@	.30
Tonox	lb.	.56	@	.60

SUBSTITUTES

Black	lb.	.06	@	.08
White	lb.	.08	@	.12
Brown	lb.	.07	@	.11

VULCANIZING INGREDIENTS

Sulfur Chloride (drums)	lb.	.04	@	—
Sulfur flour,				
Ref'n'd, 100% pure (bags)	cwt.	2.40	@	2.75
Commercial (bags	cwt.	1.75	@	2.10
Telloy	lb			
Vandex	lb			

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The RUBBER AGE

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Looking Forward

THE spirit of the times must be optimism and confidence. The election is over. American business and industry need have no fear of uncertainty and can now forge ahead with new vigor. Courage in the development of new enterprises, a long view in the handling of industrial problems and a will to see the situation better itself, will go far to advance conditions to normalcy.

In the recovery of business there will be the necessity for much replacement of machinery and equipment, replenishment of stocks of raw materials and the purchase of all manner of supplies. The part to be played in this rehabilitation by the trade press through its value as a advertising medium to suppliers will prove a big factor.